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(71) Applicant (for all designated States except US): **DOW GLOBAL TECHNOLOGIES INC.** [US/US]; Washington Street, 1790 Building, Midland, MI 48674 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **MARTINEZ, Felipe** [CO/US]; 3206 Loblolly Pines Way, Houston, TX 77082 (US).

(74) Agent: **DICKERSON, James, H.**; The Dow Chemical Company, Intellectual Property, P.O. Box 1967, Midland, MI 48641-19677 (US).

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(54) Title: **THIN FOAMED POLYETHYLENE SHEETS**

(57) Abstract: The present invention relates to the use of particular blends of LLDPE and LDPE together with specific fabrication conditions to make foamed sheets of thin gauge with MD tear properties similar to an equivalent gauge non-foamed sheet of the same composition. In particular, blends which combine a high MI LLDPE rich fraction with a low MI branched LDPE minor fraction provide the adequate balance of mechanical strength of the polymer base with its melt strength, extensibility and stress relaxation, allowing a thin foam film with MD tear strength which is comparable to non foamed counterparts of similar gauge and composition. The foamed films of the present invention are thin (generally from about 1 to 10 mils thick), and have an MD tear strength of at least about 160 grams for a 3 mil film as measured by ASTM D 1922. The foamed films of the present invention are preferably made at least in part from blends which comprise from 10 to 95 percent by weight of LLDPE having a relatively high (1.5 to 6) MI and from 5 to 90 percent of an LDPE resin having a relatively low MI (0.5 to 2.0).



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